CLAIMS

1. A receiver and micro-optics solar concentrator comprising:

a) anisotropic rotatable miniature reflectors disposed in a surrounding medium of an optically transmissive lubricating fluid disposed behind an optically transmissive surface;

b) means for aligning said anisotropic rotatable miniature reflectors;

c) means for tracking the source of light; and

d) means for focusing said reflecting system unto said receiver;

2. The apparatus of claim 1, wherein said receiver is supported by at least one rod above said concentrator.

3. The apparatus of claim 1, wherein at least one rod acts as a conduit to carry electrical wires to and from said receiver..

4. The apparatus of claim 1, wherein said micro-optics concentrator is adjacent to the ground.

5. The apparatus of claim 1, wherein the said micro-optics concentrator is in modular form.

6. The apparatus of claim 1, wherein said receiver has fins for enhanced convective cooling.

7. The apparatus of claim 1, wherein the aligning means is at least one electric field wand.

8. The apparatus of claim 1, wherein the aligning means is at least one magnetic field wand.

9. The apparatus of claim 1, wherein said optically transmissive surface is covered by at least one removable plastic film.

10. The apparatus of claim 1, wherein a plurality of micro-optics solar concentrators are disposed in different angular orientations.

11. The apparatus of claim 1, wherein a plurality of micro-optics solar concentrators and receivers are each disposed in different angular orientations comprising at least one pair of concentrators and receivers in substantially parallel alignment.

12. The apparatus of claim 1, wherein a plurality of sensors are dispersed on the surface of said micro-optics solar concentrator to sense solar beam mis-stearing.

13. The apparatus of claim 1, wherein a plurality of sensors dispersed on the surface of said micro-optics solar concentrator to sense solar beam mis-stearing are connected to a circuit for fail-safe defocusing of the solar beam.

14. The apparatus of claim 1, wherein at least one pair of concentrators and receivers are placed under a transparent cover.

15. A method of concentrating and receiving solar energy provided by a receiver and solar concentrator with anisotropic micro-optic reflectors comprising the steps of::

a) aligning said anisotropic micro-optic reflectors;

b) tracking the source of light; and

c) focusing the reflecting system unto said receiver;

16. The method of claim 15 further comprising the step of supporting the receiver by at least one rod above said solar concentrator.

17. The method of claim 15 further comprising the step of utilizing at least one rod as a conduit to carry electrical wires to and from said receiver..

18. The method of claim 15 further comprising the step of placing said micro-optics concentrator on the ground.

19. The method of claim 15 further comprising the step of constructing said micro-optics concentrator in modular form.

20. The method of claim 15 further comprising the step of providing said receiver with fins for enhanced convective cooling.

21. The method of claim 15 further comprising the step of aligning said reflectors by means of an electric field wand.

22. The method of claim 15 further comprising the step of aligning said reflectors by means of a magnetic field wand.

23. The method of claim 15 further comprising the step of fiducializing the orientation of the reflectors in situ.

24. A method for improving the alignment capability of rotatable miniature reflectors of a micro-optics system for concentrating reflected sunlight disposed in a surrounding medium of an optically transmissive lubricating fluid retained between upper and lower sheets, the lubricating fluid disposed behind an optically transmissive surface, the method comprising the steps of:

a) heating the display for a limited time; and

b) agitating the rotatable miniature reflectors relative to the surrounding media during heating.

25. The method of claim 24 wherein the agitation is provided by vibration of the said micro-optics system.

26. The method of claim 24 wherein the agitation is provided by rotation of the said rotatable miniature reflectors.

27. The method of claim 24, wherein the display is heated in the range of 35 to 90 degrees Centigrade.

28. The method according to claim 24, wherein the rotatable miniature reflectors are balls.

29. The method according to claim 24, wherein the rotatable miniature reflectors are generally cylindrical.

30. The method according to claim 24, wherein the rotatable miniature reflectors are electromagnetically anisotropic and wherein the agitating step includes alternating an electriomagnetic field and thereby rotating the anisotropic reflectors relative to the surrounding media.

31. The method according to claim 24, wherein an alternating electric field is driven at one to three times the alignment field for the concentrator.

32. The method according to claim 24, wherein an alternating magnetic field is driven at one to three times the alignment field for the concentrator..

33. The method according to claim 24, wherein a manufacturing step includes drawing a vacuum between the said sheets so as to degas the medium therein.